EXHIBIT A

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JCAP

Gold
Canada

May 28, 2020

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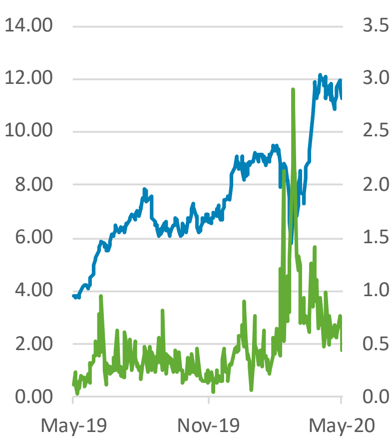
NovaGold (NG US)

Price	$10.62
Market Cap $ mln	$3,490
Rating	**Sell**
Avg Vol	**942,417**

NovaGold last share price in USD (left, blue) and volume in mln shares (right, green)



Source: Bloomberg May 28, 2020

NovaGold (NG US)

Pipe Dream

The deposit that will never be mined

For the last 15 years, NovaGold's management team has systematically misled investors with subjective presentation of information about a deposit so remote and technically challenging that the mine will never be built. During that time, management has been treating this 12-person concept company like an ATM, awarding themselves base salaries that rival those of the CEOs at Newmont and Barrick and total compensation packages comparable with those at Rio and BHP. If the information from the company's feasibility studies were presented in a more honest light, investors would understand that the Donlin deposit, of which they own 50%, is not feasible to put into production at any gold price.

Management deliberately misleads investors with custom metrics designed to deceive, directing investors to presentations which claim the deposit will require $6.7 bln in capital, however, the feasibility study clearly shows this number is $8 bln (already, we believe, far too low). The proposed natural gas pipeline central to powering the project is dead on arrival. The terrain around the Donlin deposit is among the most inhospitable on the planet. Based on recent cost-per-inch/mile data we obtained from ICF,[1] we show the costs of the pipeline (if someone were even to attempt to build it) are likely in excess of $3 bln, two to four times higher than management's previous forecast. One engineer we spoke with who worked on costing the pipeline told us he doesn't know of any engineering company that has the experience to build such a complex pipeline.

Management has a long history of over-promising. The Galore Creek project, once promoted as the company's key asset, was quietly sold at a loss in 2018 after revised capex estimates increased by 5x.

In short, this is a stock promote, not a mining plan.

1 https://www.ingaa.org/File.aspx?id=34658

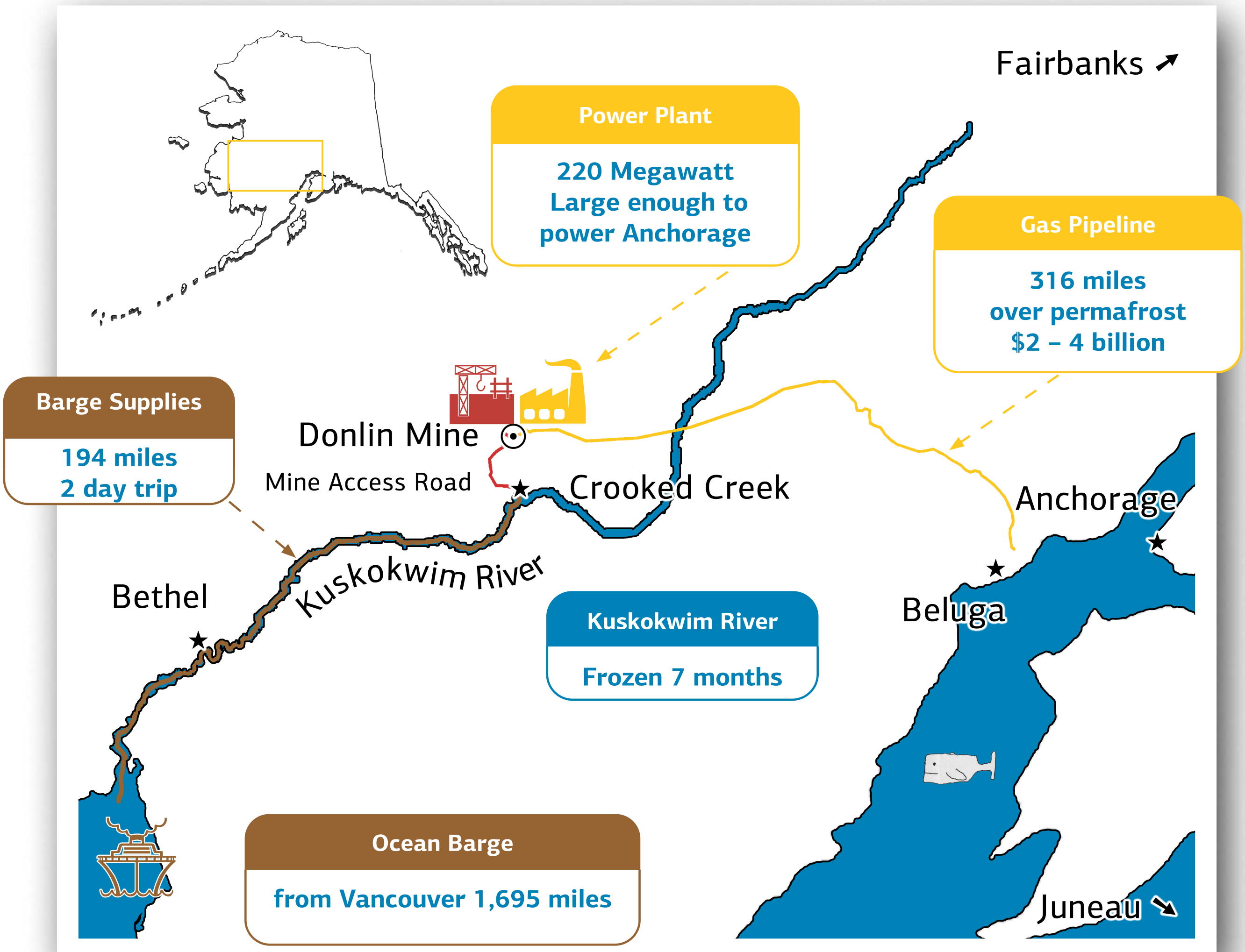
“You know that our strategy is not to make any wine before its time. A wise man once told me that these kinds of assets are rarer than hens' teeth." Thomas Kaplan October 3, 2018

NG’s silver-tongued CEO is already preparing the ground for the inevitable pipeline failure by focusing investors on the potential for a higher-grade, smaller mine. Management has drilled only 16 drill holes since 2011 and not even released the modeling results of the last, meager exploratory drill assays in 2017. If the grade had improved, they would be shouting it from the rooftops.

Management's narrative hasn't convinced everyone, Barrick (GOLD US), NovaGold’s 50:50 joint-venture partner and the largest gold miner in the world, is so unenthusiastic about the project that Barrick hasn't included Donlin in its new 10-year program, despite this year’s higher gold price. “We’re not changing the rules on this,” Barrick CEO Mark Bristow said on the Q4 earnings call on February 12, 2020 when asked about Donlin. The rule Bristow was referring to was Barrick’s estimate of capital costs and return based on a long-term gold price of $1,200 per ounce. Contrast this with Bristow’s comments on Skeena Resources’ (SKE V) Eskay Creek asset, which he characterized as “the value being uncovered by our partners at Eskay Creek in British Columbia.” Unlike NovaGold, Skeena’s management team isn’t promotional, which explains why Skeena’s market cap is just one-sixth of NovaGold’s.

Management’s game is clear: keep investors interested in the stock while they rake in huge salaries. Construction of the Donlin mine was originally expected to start in 2008. Now, 12 years later, management’s best guess is that construction may start in 2022 and production in 2028. The icing on the cake? Taking advantage of renewed market enthusiasm due to higher gold prices by cashing equity to the tune of $35 mln, $25 mln of which was in the last 12 months.

Chart 1: Donlin Deposit Map



Source: Company presentations, J Capital

Pipeline: Project Killer

Donlin is more an infrastructure project than a mine. The gold is in microscopic deposits in igneous rock. To power the processing machinery to grind the rock small enough that gold can be chemically leached out, Donlin would require a 220 MW power plant, sufficient to supply electricity to a city of 500,000 people. It would be the largest power plant in Alaska and increase the electricity produced in that state by about 40%. To fuel the power plant, management claim they can build a 316-mile pipeline. We think it's a dead letter.

Hercules cargo aircraft transporting mining equipment | Source: Alamy

Pipeline capex would run 200-400% of management's forecast

Management's biggest misrepresentation is around the cost to build the pipeline. They estimated it would cost $1 bln, or $230,544 per inch/mile (the standard unit for costing pipelines), however we have found that a comparable pipeline (Mackenzie pipeline) was costed out in 2013 for double that price--$471,111—and abandoned in December 2017[2] after more than a decade of planning and despite all approvals achieved because it was just too expensive to build.

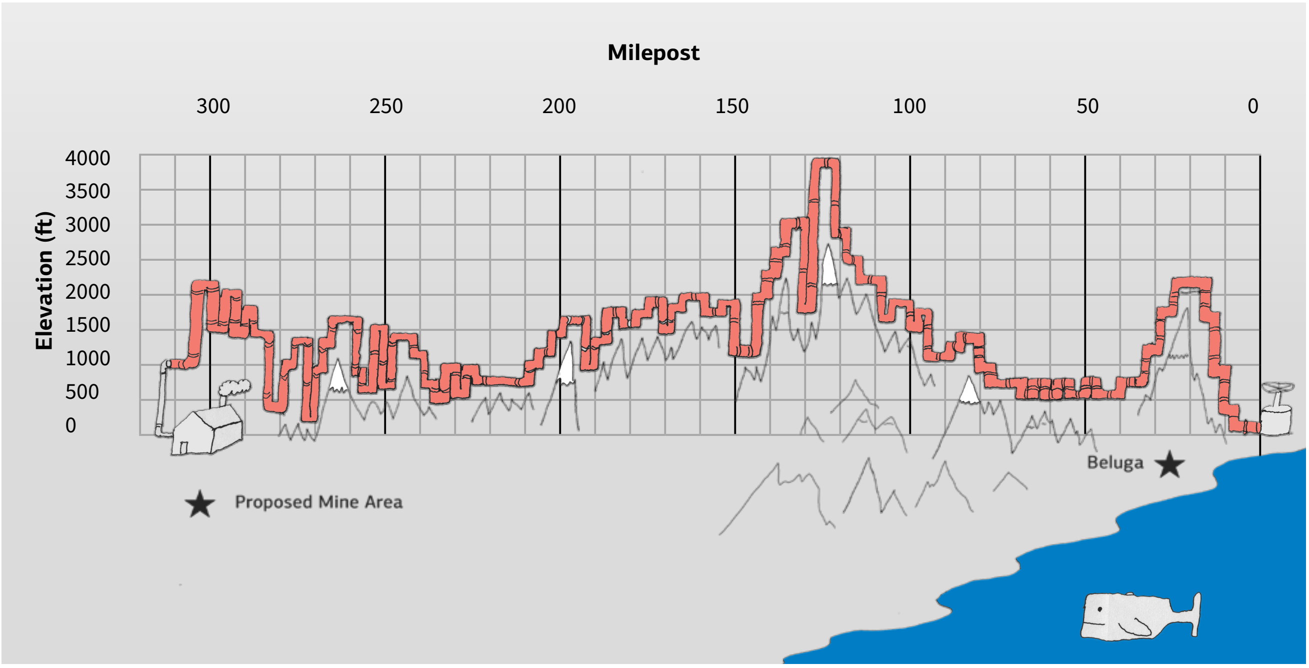
We consulted a pipeline expert who was familiar with the project. He reluctantly agreed with our view that the cost and difficulty of building the 316-mile pipeline that Donlin's remote location necessitates makes improbable it's a viable option for the company. We walked him through our assumptions for the pipeline, and he confirmed our rough estimates that the pipeline capex would run 200-400% of management's forecast.

Applying the inch/mile costing used on the Mackenzie Pipeline to the Donlin site, we arrive at a capex cost of twice that given by management--$2.09 bln. The 750-mile, 30-inch Mackenzie Pipeline was costed at $10.6 bln in December 2013, or an inch/mile cost of $471,111.[3] The inch/mile costing metric eliminates the cost differences between 14 inches and

2 https://www.cbc.ca/news/canada/north/mackenzie-valley-gas-project-no-more-1.4465997

3 https://www.naturalgasintel.com/articles/96876-mackenzie-gas-project-floundering-amid-low-gas-prices

Chart 2 Pipeline Elevation Cross Section: Mountainous Terrain



Source: Company filings, J Capital

30 inches. The Mackenzie pipeline is useful for comparison because the: Mackenzie River Delta of Canada's Northwest Territories has a similar climate and geology to the adjacent Alaskan territory and the Donlin project pipeline,[4] albeit milder, with less permafrost.

In addition to initial lowballing of cost, we believe that as a result of cost inflation, the pipeline cost could exceed $3.8 bln. Data from the Interstate Natural Gas Association of America show that costs have risen by 82% since 2012, when the Donlin pipeline was costed out.[5]

4 Volumes 1, 2 and 3 of Imperial Oil's Application for the Mackenzie Gathering System outline the project https://apps.cer-rec.gc.ca/REGDOCS/Item/View/3892106, we spoke with a pipeline engineer familiar with Donlin and he agreed the Mackenzie Valley Pipeline was a comparable pipeline but not necessarily a 1:1 ratio as the logistics cost for larger diameter pipes may be higher.

5 The Interstate Natural Gas Association of America https://www.ingaa.org/File.aspx?id=34658

Chart 3 North American Pipeline Costs

Exhibit 6: Pipeline Construction Cost (2016$ per Inch-Mile) for the Escalating Unit Cost Case

	Year	U.S.	New England	Northeast (NY, NJ)	Pennsyl-vania	Mid Atlantic	Southeast	Florida	Midwest	South Central	Central/ Mountain	Pacific Northwest	California
Historical Data	2000	$65,595	$217,511	$119,003		$55,733	$77,425	$80,612		$25,301	$36,241	$67,079	$61,394
	2001	$55,440		$95,831	$84,677	$51,902	$64,427	$162,841	$68,477		$49,466	$69,644	$46,447
	2002	$58,304	$524,223	$67,205	$86,858	$71,357	$71,632	$409,681	$57,410	$77,896	$34,037	$1,587,181	
	2003	$81,100	$323,536		$92,961	$495,625	$87,524		$121,235	$62,066	$52,727	$203,125	
	2004	$87,788	$415,355	$170,167	$84,684	$109,700	$106,618	$119,339	$90,239	$109,592	$45,452	$122,893	$55,582
	2005	$66,730	$253,797	$94,846	$134,334	$84,809	$74,679	$107,266	$102,164	$59,459	$56,779		$73,688
	2006	$84,788					$78,354		$80,301	$89,561	$61,827		
	2007	$109,156	$405,818	$620,070	$209,985		$67,299			$68,619	$77,145	$154,274	
	2008	$68,083	$321,385	$422,668	$108,217	$217,086	$127,593		$146,625		$75,375	$101,829	
	2009	$148,422	$134,468		$131,043		$179,172			$126,625	$246,653		
	2010	$111,656	$750,271		$156,318		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	2011	$118,999			$149,573		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$129,284	
	2012	$142,914		$414,225	$133,296		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		$308,531
	2013	$218,603	$573,689	$390,662	$207,304	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$170,160	$238,668
	[illegible]	[illegible]	[illegible]		$193,247	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		$403,035
	[illegible]	[illegible]	[illegible]	$568,032	$175,283	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$118,454	
	2016	$356,149	$629,279	$663,910	$222,300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Projection	2017	$229,708	$660,011	$594,650	$198,123	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$187,132	$400,264
	2018	$240,053	$680,754	$620,588	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$193,824	$422,666
	2019	$250,397	$701,498	$646,526	$209,418	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$200,516	$445,068
	2020	$260,742	$722,242	[illegible]	$215,065	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$207,208	$467,471
	2021	$271,087	$742,986	$698,402	$220,713	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$213,900	$489,873
	[illegible]	[illegible]	[illegible]	$724,340	$226,360	$295,242	$185,261	$348,116	$205,402	$190,303	$165,212	$220,592	$512,275
	[illegible]	[illegible]	[illegible]	$750,278	$232,008	$304,679	$190,413	$358,672	$210,888	$195,975	$170,779	$227,284	$534,677
	2024	$302,121	$805,217	$776,215	$237,655	$314,116	$195,564	$369,227	$216,374	$201,647	$176,345	$233,976	$557,079
	2025	$312,466	$825,961	$802,153	$243,303	$323,553	$200,716	$379,783	$221,860	$207,319	$181,911	$240,668	$579,482
	2026	$322,811	$846,705	$828,091	$248,951	$332,990	$205,868	$390,339	$227,346	$212,991	$187,478	$247,360	$601,884
	2027	$331,405	$863,938	$849,639	$253,642	$340,830	$210,148	$399,108	$231,904	$217,703	$192,102	$252,919	$620,494
	2028	$338,099	$877,361	$866,423	$257,297	$346,936	$213,481	$405,938	$235,454	$221,373	$195,704	$257,249	$634,990
	2029	$341,937	$885,057	$876,046	$259,392	$350,438	$215,393	$409,854	$237,490	$223,478	$197,769	$259,732	$643,302
	2030	$347,151	$895,513	$889,120	$262,239	$355,194	$217,989	$415,175	$240,255	$226,337	$200,575	$263,105	$654,593
	2031	$350,299	$901,826	$897,014	$263,957	$358,066	$219,557	$418,388	$241,925	$228,063	$202,269	$265,142	$661,411
	2032	$354,577	$910,403	$907,739	$266,293	$361,968	$221,687	$422,752	$244,193	$230,408	$204,570	$267,909	$670,675
	2033	$357,183	$915,630	$914,275	$267,716	$364,346	$222,985	$425,412	$245,576	$231,838	$205,973	$269,595	$676,319
	2034	$361,288	$923,860	$924,566	$269,956	$368,090	$225,029	$429,600	$247,752	$234,088	$208,181	$272,250	$685,208
	2035	$364,232	$929,764	$931,948	$271,564	$370,776	$226,496	$432,604	$249,314	$235,702	$209,766	$274,155	$691,583

2012 $142,914

2020 $260,742

Pipeline unit costs have increased 82% since the feasability study.

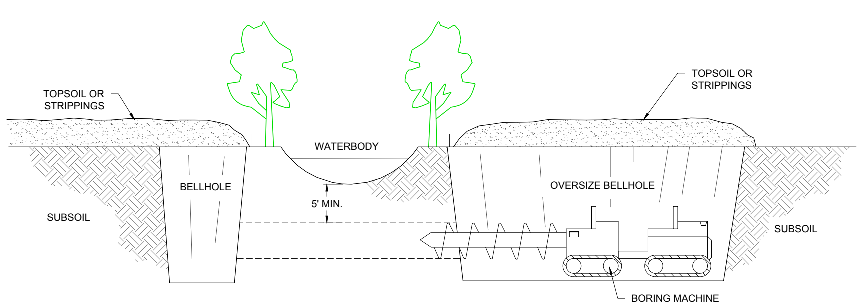
Data is based on 35,000 miles of actual pipeline construction up 2013-2017 and estimates 41,000 miles 2018-2035 over a wide variety of terrain.

Source: North American Midstream Infrastructure through 2035, The Interstate Natural Gas Association of America https://www.ingaa.org/File.aspx?id=34658

The pipeline would be one of the most difficult ever built, with 95% of the terrain hilly or mountainous. The pipeline route is frozen for seven months of the year, and the discontinuous permafrost creates engineering complexity, as the ground in spring turns to wetlands and bogs the machinery. Each of 300 stream crossings will require a temporary bridge, and dam, and two pits, one on either side of the stream, for the drilling equipment to bore a hole under the stream. The estimated construction time is three to four years.

The pipeline would be one of the most difficult ever built, with 95% of the terrain hilly or mountainous.

Chart 4 Waterbody crossing



TYPICAL WATERBODY CROSSING HORIZONTAL BORE PROFILE
N.T.S.

Source: Drawings for Natural Gas Pipeline Permit Application November 2015 http://dnr.alaska.gov/mlw/mining/largemine/donlin/pdf/dg.da404.dwg.pdf

The expert we spoke with confirmed "There isn't a lot of contractor/industry experience anywhere for the permafrost and environmental issues you might encounter." There are also changes that will need to be made for environmental reasons that have not been included in pipeline estimates, and those changes will add cost.

The mine's own feasibility study stated that accuracy of the capital cost estimate is considered to be between -15% and +30%. But mines are never built for less; they are always built for more. Mining construction projects on average have cost overruns of 62%, according to a survey by Ernst and Young.[6]

6 https://www.ey.com/Publication/vwLUAssets/EY-opportunities-to-enhance-capital-productivity/$FILE/EY-opportunities-to-enhance-capital-productivity.pdf

Aerial of tug pushing barge upriver on Kuskokwim River near Akiachak, Western Alaska, summer | Source: Alamy

Plan B: Also a bust

Likely preparing investors for the inevitable "pivot" when it becomes clear that the pipeline won't work, the management team started to claim they could solve the power issue by barging diesel 194 miles up the Kuskokwim River. This looks even less plausible than the pipeline, according to data buried in the feasibility study. Even if NovaGold reduced the mine capacity by half, it could not barge in enough diesel to operate the power plant.

The current mine configuration would require 1.1 ML (Mega Liters or 1 mln liters) of diesel per day or 403 ML per year to fuel the power plant. The total diesel that can be barged up the river is at best is 253 ML. The mine vehicles alone would consume 151 ML per year.

After mine vehicle use, that would leave enough diesel to power the plant for between 67 and 93 days.

The Donlin Mine has been granted environmental approval for 58 round trips by fuel barges per year of operation. Given restrictions imposed by river flow, each fuel barge trip could transport on average around 4.2 ML. After mine vehicle use, that would leave enough diesel to power the plant for between 67 and 93 days. Under the most optimistic scenario, cutting production to half of what is now planned, the diesel barged in would be sufficient for at most seven months of operations per year, essentially reducing output to a quarter of what is now planned.

Table 2 Diesel Shipping and Consumption

Shipping days/year	**110**
Fuel barge round trips/year	**58**
Barge trip (4 barges lashed) gallons/round trip	**1,277,368**
Capacity at 80%	1,021,894
Capacity at 90%	1,149,631
Litres/gallon conversion	3.8
Total Diesel Transport ML/year	
Low	225
High	253
Mine Vehicle Diesel consumed ML/year	**151**
Excess available to fuel power plant ML/year	
Low	74
High	102
Power Plant Diesel ML/day[7]	**1.1**
Days of power plant operation - Low	67
Days of power plant operation - High	93

Source: Donlin Gold Mine, Final Environmental Impact Statement April 2018, Donlin Plan of Operation, December 2016, US Energy Information Administration, US Energy Information Administration https://www.eia.gov/tools/faqs/faq.php?id=667&t=3

NG tries to square the circle

Investors shouldn't be surprised with the narrative change. For years, NG management has been trying to find a way around the fundamental problem of getting energy to the site. They have floated the idea of a coal-fired plant, wind turbines—even biomass.

In the earliest days of the mine, it was to be grid-connected by a power line that would take three years to construct. The only problem was the grid they were planning to connect to did not have the power to supply the project. Then they tried coal. The coal power was to be from a new mine-mouth power plant in Healy. Our favorite idea was the possibility of using peat near the mine. Wind power was considered for 20% of the mine's power needs in 2006 and diesel for the balance. “We have gone with on-site diesel power with wind cogeneration,” said the CEO on February 24, 2009.

7 Diesel consumption calculated diesel BTU/kWh=11095, BTU/gallon 139,762

"We start construction at Donlin Creek in 2008." CEO 2006

Table 3 Donlin's History of Power Sources

Date	Energy Source
2006	Grid connected to Anchorage
2006	Peat
2006	Coal
2006- 2010	Wind (with diesel and then natural gas
2006, 2011	Diesel
2012	Natural Gas
2014	Diesel/Natural Gas

Source: Company reports

Fool's gold

With all permits for Donlin secured and close to all-time-high gold prices, management is stalling for time: investors are being asked to wait for another feasibility study. Management is dangling the idea that there might be an even bigger mine and richer deposits, even though Donlin already has a large enough reserve for 27 years of mine life:

> "There are clearly opportunities for substantial expansion of the resource." CEO Greg Lang, January 23, 2020

> "[T]here are clearly significant future opportunities for substantial expansion of the resource. When the time is right, we will resume exploration." Greg Lang, October 2, 2019

> "While the Donlin Gold deposit is well known, there are future opportunities for additional drilling and expansion of the resource." Greg Lang, June 27, 2019

Actually, NG's own study showed disappointing results after the very limited foray beyond the main mining area, back in the 1990s. Since 2011 they have drilled only 7,040 meters, 16 drill holes, which runs counter to the idea that they are interested in exploring a larger ore body.

The pornography test

Given the enormous technical complexity of constructing the pipeline and the impossibility of barging enough oil to power the project, management likely knows that this project isn't feasible, which is why executives are evasive when analysts attempt to pin them down on timing for further development

Comments by Thomas Kaplan:

> "My sense is that the moment will come in a not dissimilar way to the way that Justice Potter Stewart when answered the question, "How do you define pornography? I can't define it, but I know it when I see it." April 2, 2020[8]

> "[W]e've always said that the time to build Donlin [is] extrinsic of the studies that are being done and optimizations and drilling and the partner is all being ready to go, extrinsic of that." April 2, 2020

> "You know that our strategy is not to make any wine before its time. A wise man once told me that these kinds of assets are rarer than hens' teeth." October 3, 2018

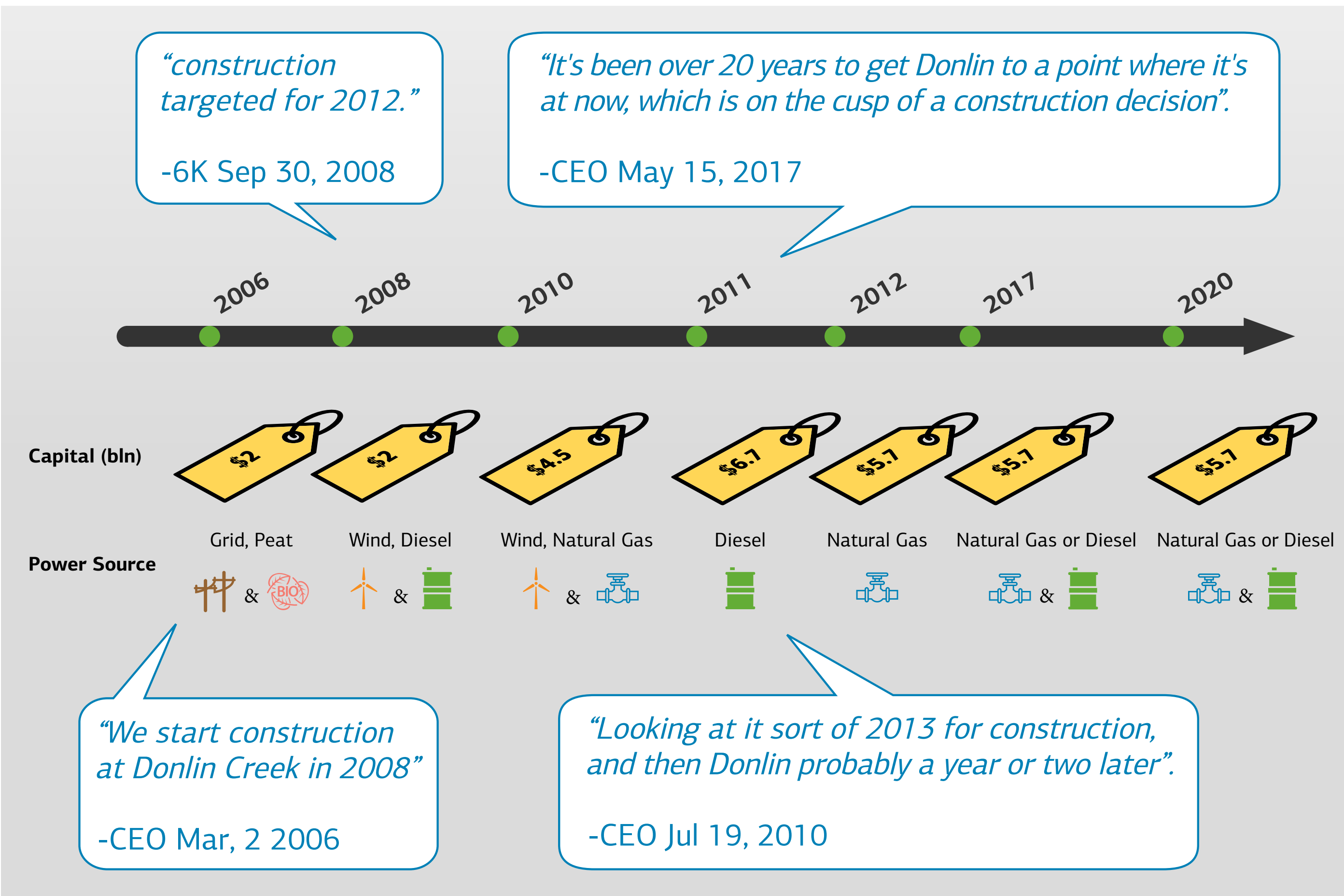
This would trouble us less if the story hadn't continually changed for 15 years. In fact, construction of the Donlin mine was originally expected to start in 2008. Now, 12 years later, management's best guess is that construction might start in 2022 and production in 2028.

8 Thomas Kaplan April 2020 analyst call

A Brief History of Management Claims

To give you a better idea of the ever-changing narrative, we have produced a timeline of the last 15 years.

Chart 5: Management Claims



Source: Company filings, J Capital

This shape shifting repeats a familiar pattern for NG. In the past decade, NovaGold feverishly talked up two other assets, only to spin off or sell them at a loss. Before the first asset, NovaCopper, was spun out, in 2012, management promoted it with the same vigor as it now promotes Donlin:

> "On our Ambler project [NovaCopper], this is a really exciting project. You can see the metal count here, there are very few deposits in the world of this caliber."[9]

9 CEO, April 21, 2010

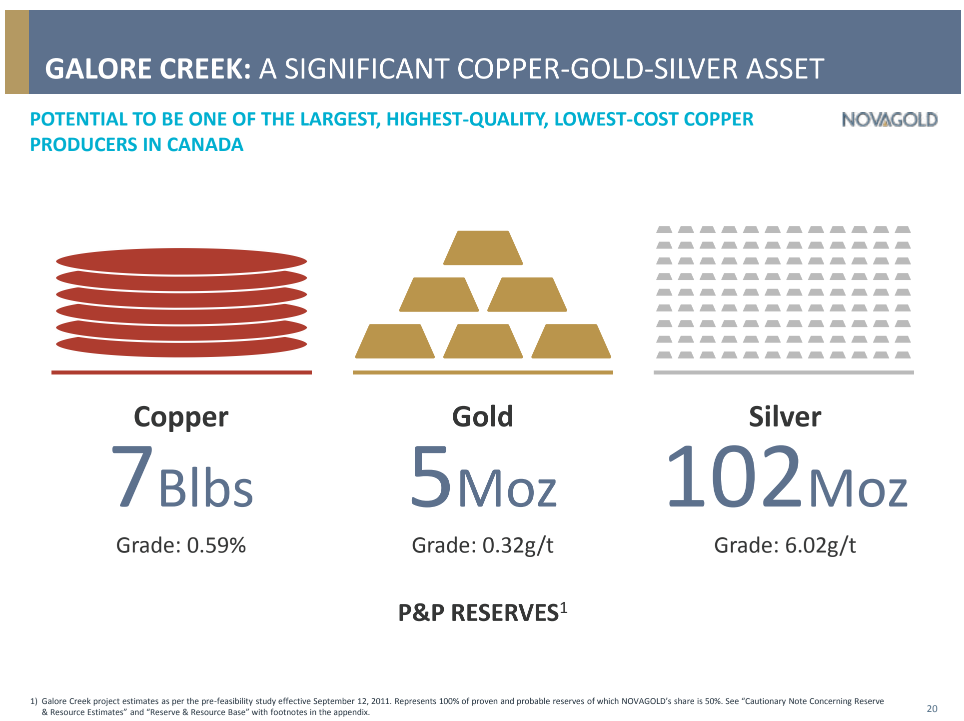
Galore Creek is a textbook case of disastrous feasibility studies and enormous under-statement of capital required.

> "There aren't a lot of comparable really to Ambler. It's such a spectacular grade for a volcanogenic massive sulphide deposit that there really aren't a lot of comparable to it."[10]

By the end of that year, NG had spun out NovaCopper. Now trading as Trilogy Metals (TMQ CN), its shares have slumped 32% since divestiture.

NG's promotional management team held out the second asset, Galore Creek, as the key project to finance the development of other deposits. With 8 mln ounces of gold and 9 bln pounds of copper, Galore was sold to Newmont (NEM US) in July 2018 for $80 mln less than NG had spent on development; NG took a loss on the sale. The $275 mln consideration included $75 mln contingent on production, which is so unlikely that NG is not accounting for it. Newmont quietly shut the project down on April 28, 2020.[11]

Chart 5: Galore Creek Promotion



Source: NovaGold presentation March 2017 the year before they divested.

10 CEO April 14, 2011

11 https://www.gcmc.ca/wp-content/uploads/2020/04/20200428_Galore-Creek-Project-Program-Update_April-2020_Final.pdf

The same mining services company that produced the Donlin Feasibility Study, AMEC, completed the study of Galore Creek.

The Galore Creek story bears striking similarities to the problems we have identified at Donlin. It is a textbook case of disastrous feasibility studies and enormous understatement of capital required.[12] In 2004, NG reported that capital costs would be $0.8 bln. In 2006, the estimate more than doubled, to $2.2 bln. In 2011, estimated costs doubled again, to $5.2 billion. The mine showed a greater than 500% increase in capital costs in just seven years. The same mining services company that produced the Donlin Feasibility Study, AMEC, completed the study of Galore Creek.

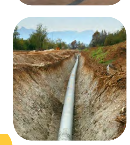
Original Sin

Management continually and deliberately misleads investors on capital costs for Donlin. Read any company report, presentation, or transcript over the last 10 years and you will see "Total Project Cost" of $6.7 bln to build the mine.

Chart 6: Total Project Costs

Areas	US$M[1]	Opportunities[1]
Mining	345	Leasing equipment ~$188M of $345M[2]
Site preparation/roads	236	
Process facilities	1,326	Oxygen plant could be built by 3rd party ~$138M of $1,326M[2]
Tailings	120	
Utilities	1,302	Pipeline could be built by third party ~$758M of $1,302M[2]
Ancillary buildings	304	
Off-site facilities	243	
Total Direct Costs	3,876	
Owners' cost	414	
Indirect Costs	1,405	
Contingency	984	
Total Owner's & Indirect Costs, and Contingency	2,803	
Total Project Cost	6,679	>$1B owners' potential initial capital reductions





Company presentation, March 2, 2020

Yet the company appears to be misrepresenting cost in the above presentation. The most recent feasibility study, done in 2012, estimated that the initial capex alone, is $8 bln, not $6.7 bln.

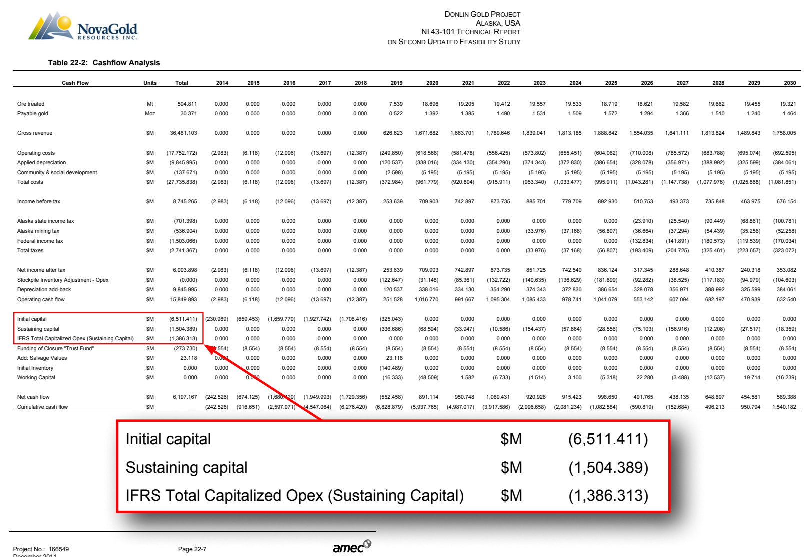
This extra initial capex cost was buried inside the Second Updated Feasibility study (February 2012) as a single line in the projected cash flow statements, not defined anywhere else in the report, and called "IFRS[13] Total Capitalized Opex (Sustaining Capital)."

12 https://www.mining.com/exploding-costs-an-analysis-of-galore-creek/

13 International Financial Report Standards

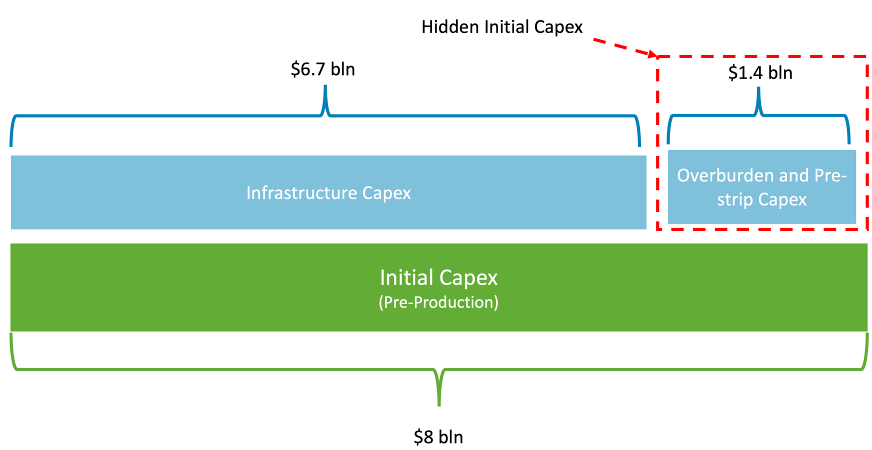
Excluding this additional cost was a deliberate attempt to mislead the market

Chart 7 Cashflow Table from Feasibility Study



Source: NG Second Feasibility Study[14]

Chart 8 Misleading Presentation of Capital Costs



Source: NG's Second Feasibility Study, 2011-12

We believe that excluding this additional cost was a deliberate attempt to mislead the market, because capitalized opex was included in the capital costs to build the mine in the first feasibility study in 2009.[15]

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14 https://www.sec.gov/Archives/edgar/data/1173420/000120445912000056/exhibit99-1.htm

15 https://sec.report/Document/0001062993-09-002031/#exhibit99-1.htm

Senior office holders and directors have taken $35 mln in net cash from share sales in the last five years.

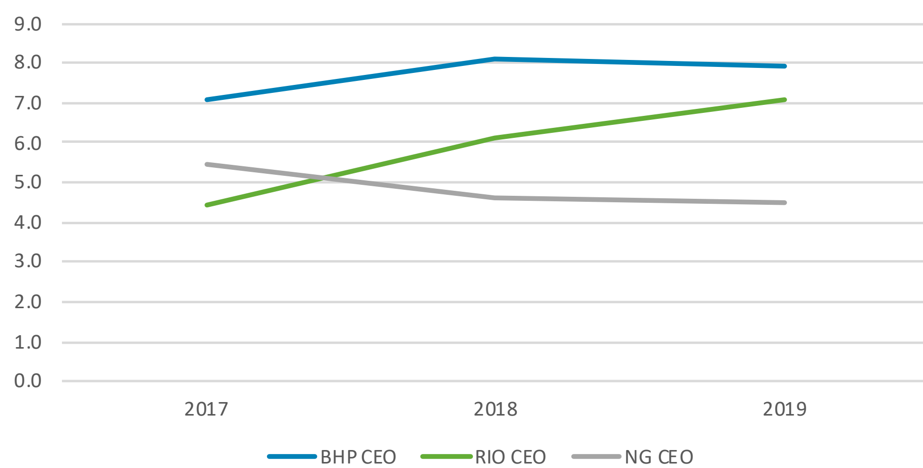
"The total estimated cost to design and build the Project .... [includes] an Owner-provided mining fleet and self-performed pre-production mine development."[16]

Self-Care

NovaGold management might have the cushiest job in mining. Despite the limited progress (the last feasibility was produced in 2012) the CEO has awarded himself $8.3 mln in cash compensation over the last five years plus over 1.8 mln shares. Senior office holders and directors have taken $35 mln in net cash from share sales in the last five years.

The CEO's total compensation rivals that of the two largest mining companies in the world, BHP, with 72,000 employees, and RIO, with 47,000.

Chart 9 CEO Total Annual Compensation US$ mln,

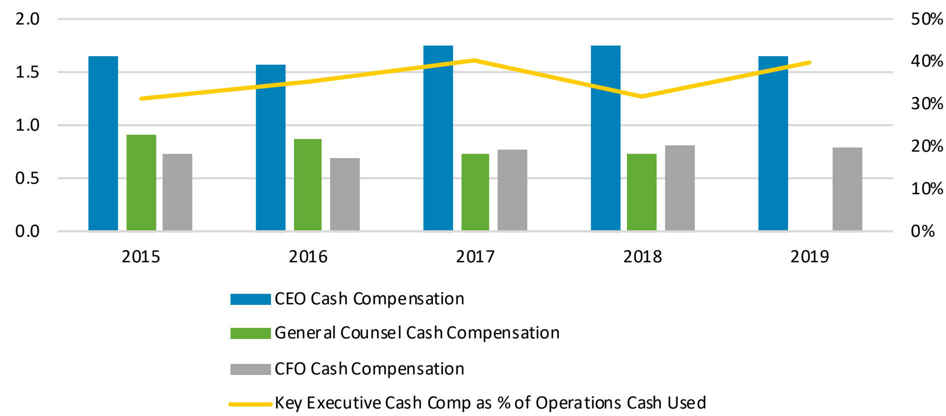


Source: Company Reports

16 First feasibility study, April 2009: https://sec.report/Document/0001062993-09-002031/#page_22

Some 70% of NG insider share sales were over the last 12 months, as the share price increased by 300%.

Chart 10 CEO, General Counsel, and CFO Annual Cash Compensation



Source: Company Reports

Some 70% of NG insider share sales were over the last 12 months, as the share price increased by 300%. The CFO's stock in the company has halved, from around 2.2 mln shares to 1 mln. The CEO has reduced his net position by 26%. Clearly, the insiders have voted with their feet.

Table 4 Insider Share Sales

Insider share sales	Position	Net Cash Sales
Lang Gregory A	CEO	$15,806,949.19
Ottewell David A	CFO	$9,629,516.76
Walsh Anthony P	Director	$2,271,348.84
Nauman Clynton R	Director	$2,175,710.12
Deisley David	Director	$1,996,975.59
Levental Igor	Director	$1,574,548.27
Dowdall Sharon	Director	$1,067,422.44
Madhavpeddi Kalidas V	Director	$479,210.79
Kaplan Thomas Scott	Chairman	$314,318.38
		$35,316,000.38

Source: Washington EZ Insider.

Promoting "optimization" and higher grades

Aware of how unattractive an investment proposition has been offered, NovaGold since early 2018 has been pushing mine "optimization." Optimization means halving production capacity to reduce capex expenditure by 40% and drilling to identify higher-grade deposits to compensate for the loss of scale.

Clearly the grade did not improve from this drilling

"As part of our ongoing optimization work, we've studied more selective mining methods as a means of enhancing the grade," CEO Greg Lang said in a January 25, 2018 call.

But management clearly knows there is no optimization to be had. Management is drilling very selectively in hopes of finding a deposit, no matter how small, with higher-than-average purity. Most recently, in 2017, the company drilled a mere 16 drill holes or 1.1% of the number of holes that had originally been used to determine the grade of the resource. Yet NovaGold has been silent on the results even of this cherry-picked study. Clearly the grade did not improve from this drilling. After the 2017 assay, the CEO sold down $2.5 mln in stock.

Nevertheless, the CEO on January 23, 2020 told analysts: 'So we think there's opportunity to -- through higher grade offset some of the economies of scale we lose."

The $15.4 mln managers have paid themselves in cash compensation would have bought investors 80 exploration drill holes rather than the 16 drilled. It could have paid for a new feasibility study into a downsized mine capacity with more affordable capex. Management paid themselves instead, because they know no new drilling or resizing of the mine will make a difference.

Table 5 Comparable Mines: Better Value

NovaGold's market capitalization values Donlin at over $8 bln, and the mine requires at least $10 bln in capital to get started. Compare that with other listed gold mines.

	NovaGold	Seabridge	Cascabel
Total Resource gold oz millions	33	30.8	23.6
Annual Production oz millions	1	0.6	0.58
Capital Cost $ billion	$9.5	$5.3	$2.8
NPV ($1,200/oz) billion	$0.54[17]	$6.1	$4.5
Capital/Oz of annual production	$9,500	$8,833	$4,827
Capital/NPV ratio	17.6/1	1/1.2	1/1.6
Market Cap $ billion	$4.03	$0.9	$0.6

We actually expect the grade to decline by 5-7% with better modeling of the resource, based on estimates in the company's feasibility study:[18]

17 NPV estimate made by NG using lowball capital costs.

18 Donlin Creek Second Updated Feasibility Study, January 2012, pp 14-16

Red Chris, an operating mine with a similar resource as NG's recently traded on a valuation of $1.15 bln.

- Seabridge (SA US) is a comparable mine in Northwest British Columbia adjacent to Alaska. Seabridge is close to a grid connection powered by cheap hydropower. Seabridge has a lower capital cost and higher NPV than Donlin and still is not funded. Market cap is less than one fifth that of NG—and Seabridge owns the whole mine.
- SolGold (SOLG LN), which owns the Cascabel mine in Ecuador, has higher country risk, but capital costs per unit of annual output and capital to NPV ratio are far better. The company also has a very low market cap given the better metrics and NPV.
- Newcrest Mining (NCM AU) acquired Red Chris from Imperial Metals (III CN) for $804 mln for 70% of an operating mine with the equivalent resources of 26 mln oz of gold. That values an operating mine at $1.15 bln with a similar resource as Donlin and no start-up capital required.

NovaGold has managed to snag its valuation strictly through enthusiastic deception. We encourage serious investors not to take the bait.

Appendix 1 Key Mine Data

Project Summary	
Reserves:	Over 33 million ounces of gold (about 500 M tons ore)
Average Grade	2.24 g/t
Mine Life:	Approximately 27 years
Production:	Over 1 million ounces of gold annually
Operation:	Open pit, conventional
Ore Processing:	53,000 tons/day: sulfide flotation, pressure oxidation (POX) and Carbon-in-Leach (CIL) recovery
Strip Ratio:	About 5.5:1 = about 3 billion tons waste rock
Tailings:	Fully lined tailings storage facility (TSF)
Power/Pipeline:	219 MW on-site gas-fired power plant, supplied by a 316-mile, 14-inch, buried natural gas pipeline
Transportation and Logistics:	Supplied by Kuskokwim River transportation system, river barge traffic, barge landing at Angyaruaq (Jungjuk), 30-mile mine access road, 5,000-foot airstrip, and transportation facilities.
Location	280 miles West of Anchorage, 155 miles north east of Bethel near Crooked Creek population 105

Appendix 2: Key Pipeline Facts

Key Pipeline Facts

Length	315 miles (507 KM)
Pipe Diameter	14 inches
Throughput	2.2 mln cubic meters/day
Topography	
Flat plains	5%
Hills and ridges	70%
Mountainous	25%
Vegetation	
Trees	60%
Light vegetation	40%
Climate	Sub arctic frozen 7 months
Geohazzard	Crosses two fault lines
Streams Crossed	300
Infrastructure	
Campsites 2 x 300 people 5-10 ha	12
Airstrips (10 to be built new)	13
Estimated Construction Time	3-4 years
Original construction plan	2016-2019

Source: J Capital

Disclaimer